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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,700	12/20/2001	Mark Skiba	47612/LTR/G319	4165
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CHRISTIE, PARKER & HALE, LLP			EXAMINER	
PO BOX 7068			THAI, TUAN V	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/027,700

Applicant(s)

SKIBA ET AL.

Examiner

Tuan V. Thai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9-13 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 and 14-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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**Part III DETAILED ACTION**

***Specification***

1. This office action responsive to communication filed June 05, 2007. Claims 9-13 are presented for examination. Claims 1-8 and 14-21 have been cancelled.

2. Applicant is reminded of the duty to fully disclose information under 37 CFR 1.56.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 9-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Regarding claim 9, the terms inside the parenthesis (e.g. "mirroring", line 4; "versioning", line 6), renders the claim indefinite and the scope of the claim unascertainable because it is unclear whether the limitation(s) inside the parenthesis are part of the claimed invention. See MPEP § 2173.05(d).

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Claims 10-13 depend on claim 9, the claims are therefore rejected for the same reason as being set forth above.

**Rejections - 35 USC § 103**

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uemura et al. (USPN: 5,720,026); hereinafter Uemura, in view of Dunn et al. (USPN: 5,668,991); hereinafter Dunn.

As per claim 9, Uemura discloses the invention as claimed including a method for backup data stored in files as the data is updated (e.g. abstract), comprising the following steps: updating one of the files, temporarily storing a copy of the updated file, comparing the copy of the updated file with the file prior to updating, storing the differences in the copy of the updated file (e.g. see column 1, lines 46-49; column 2, lines 25 bridging column 3, line 3). Uemura, discloses the all the elements of the

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current invention except for storing a copy of the updated file and storing the differences in such copy each time one of the files is updated. Dunn, in his teaching of database management system, discloses the missing elements that are known to be required in the invention of Uemura in order to arrive at the Applicant's current invention wherein Dunn teaching storing a copy of the updated file and storing the differences in such copy each time one of the files is updated as being equivalent to **whenever** (everytime) the a page of the database file is updated by the database program, a block is written to the journal file 12 which contained the updated file, wherein the block contains (a) a bit map record which contains a page number and a **string of bits indicating which records within the page have been updated**, (b) an after-image record included for each database record that has been updated for the page (e.g. see abstract, column 2, lines 5 et seq.). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to utilize the teaching of Dunn wherein each time one of the files is updated, storing a copy of the updated file and storing the differences in such copy for that of Uemura's system in order to arrive at Applicant's current invention. In doing so, it would allow for the quickly recovery and/or restoring of the corrupted original file when failures occurred in the system which results to the greatly enhancement

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in system reliability and throughput, therefore being advantageous.

As per claims 10 and 13, the further limitation of restoring concept wherein temporarily storing a copy of the current version of the file being restored, applying the stored difference to the stored copy of the current version to produce a copy of an earlier version of the data/file being restored (by the difference management mechanism 203 detailed below), and repeated the steps until a desired version of data/file is produced are taught by Uemura starting at column 10, lines 8-13 wherein Uemura teaches to restore the incremental backup data, the incremental backup data which is temporarily saved via the pseudo device driver interface can be written into the pseudo device driver interface in sequence for the backup volume (or data file) where data to the generations preceding the incremental backup is already restored (e.g. see column 10, lines 8-13), Uemura further discloses when the incremental backup data is restored, or when the difference map information 600 and block data gotten as the incremental backup data are written into the pseudo device driver (which can be used from a file system for file restoring; e.g. column 6, lines 23-24), the difference management mechanism 203 restores the block data (or file data) to the disk unit or the logical disk unit where the backup in the generation to reproduce the difference data is complete based on the received difference

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map information 600 (e.g. see column 6, lines 36 et seq.). By this rationale, claims 10 and 13 are rejected.

As per claims 11 and 12; the further limitation of the temporarily stored copy is stored until the next time one of the files is updated is embedded in the incremental backup operation that is taught by Uemura, since (a) it is well-known and notorious old that in the incremental backup operation, only the difference data updated since the most recent backup is being backed up without backing up the entire data, and (b) Uemura clearly teach that whenever incremental backup is performed, data indicating whether or not blocks have been updated is registered/stored in the difference map information 600 OVER backup generations, update data is temporarily stored/registered until the next update (e.g. see column 5, lines 21-36). By this rationale, claims 11 and 12 are rejected.

7. With respect to the remark, Applicant's counsel contended that nowhere does Dunn suggest backing up data each time the data is updated as set forth in claim 9. First of all, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. In re Nomiya, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the

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modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. In re McLaughlin, 170 USPQ 209 (CCPA 1971). Uemura and Dunn references are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. In re Bozek, 163 USPQ 545 (CCPA) 1969. In this case, the Dunn reference was used to provide evidence of the well known concept of backing up data each time the data is updated; even though, Applicant's counsel correctly pointed out that Dunn mentioned in the disclosure and Abstract of his invention about periodic data dumps and other data handling activities at regular intervals, this merely is at a system level; however, Dunn, at another detailed/sub-system level, specifically discloses **whenever (or everytime)** a page (data) of the database file is updated, it backing up the data (difference/updated) by writing a block to a sequential journal file 12 wherein the block contains a block header, a bit map record, and one or more after-image records wherein each after-image record is included for each database record that has been updated in the page, and each after image record contains the database key that identifies the database record and the new value (difference) of the database record. (e.g. see column 2, lines 5-20). Therefore, the 103 rejection based on incorporating the well known concept of storing a copy of the updated file and



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storing the differences in such copy each time one of the files is updated, as evidenced by Dunn, into Uemura's system is deemed to be proper. Secondly, Examiner would like to emphasize that in considering a 35 USC 103 rejection, it is not strictly necessary that a reference or references explicitly suggest the claimed invention (this is tantamount to a 35 USC 102 reference if the modifications would have been obvious to those of ordinary skill in the art. It has been held that the test of obviousness is not whether the features of a secondary reference may be bodily incorporated into the primary references' structure, nor whether the claimed invention is expressly suggested in any one or all of the references; rather, the test is what the combined teachings of the reference would have suggested to those of ordinary skill in the art. See In re Keller et al., 208 U.S.P.Q 871.

### **Conclusion**

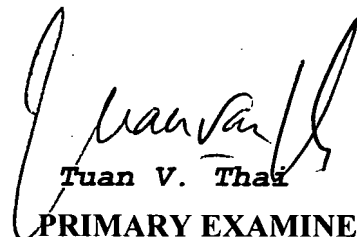
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan V. Thai whose telephone number is (571)-272-4187. The examiner can normally be reached on from 6:30 A.M. to 3:00 P.M..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mathew M. Kim can be reached on (571)-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**TVT**/September 30, 2007

  
**Tuan V. Thai**  
**PRIMARY EXAMINER**  
**Group 2100**